Migration of the Bar-tailed Godwit Y5RBRL

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Tattler

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Red-necked Stint at Long Reef, Sydney. Blue over yellow flags identify it as having been flagged in Bohai Bay, China. Photo ©Edwin Vella

Editorial

The East Asian-Australasian Flyway is a trans-global concept most of us are used to. Tracking the migrating shorebirds with colour bands, flags, geolocators and satellite transmitters has highlighted pathways and staging sites within the flyway, but the people and the passions behind all that work sometimes remain obscure. This edition includes some of the people whose passion has encouraged others to become involved in shorebird research, with far-reaching results. It also includes a project to engage artists and an inspiring project to fly a microlight aircraft along the migration route. Both these projects aim to raise awareness in the broad community.

Recently we visited Sungei Buloh Wetlands Reserve in Singapore where David Li, Senior Conservation Officer with National Parks, conducts shorebird research. Many of the Whimbrel, Pacific Golden Plover, Common Greenshank and Redshank roosting at high tide carried green-over-white engraved leg flags, testament to the hard work of shorebird researchers in Singapore. It's great to see these wetlands preserved in such an intensely populated and highly developed island.

Liz Crawford, Editor

Contributions are welcome and should be sent to: tattler@awsg.org.au

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Migration of Bar-tailed Godwit Y5RBRL

This is a story about the ten-thousand kilometre journey of a Bar-tailed Godwit, travelling between the tropics and the Arctic, between pristine and industrial environments, and between different nations and cultures.

Some background facts: *menzbieri* godwits are somewhat largish shorebirds, who breed in the Russian Arctic and "overwinter" on the hot coasts of NW Australia, and therefore migrate along the coasts of the Yellow Sea in China twice a year. Many intertidal zones along this flyway are threatened. Tracking shorebirds (and their populations) with satellite transmitters on their annual migrations is necessary to target conservation action to the right places. From the tracks, we can identify the (remaining) crucial intertidal mud flats for long-haul migrants in China and along the East Asian-Australasian Flyway.

Ginny (Ying Chi) issuing a small solar-powered satellite transmitter to a Bar-tailed Godwit at Eight Mile Beach, NW Australia, February 2017. Photo: Jesse Conklin

The Karajarri Ranger Group and Chris Hassell releasing Bar-tailed Godwits tagged with satellite transmitters on Eight Mile Beach, NW Australia, February 2017. Photo: Yvonne Verkuil

We give Bar-tailed Godwits satellite transmitters in NW Australia, and every spring we literally 'follow' these tagged godwits twice, by surveying their staging sites in China, and watching the data come in from the transmitters. The 2017 journey of **Bar-tailed Godwit Y5RBRL** is shown in **Figure 1** and detailed below.

Figure 1 - Areas used by Bar-tailed Godwit Y5RBRL in 2017. Orange stars – staging areas in Jiangsu Province and Shandong Province in China, and on New Siberian Islands; Yellow star – breeding area; Green star – non-breeding area in NW Australia.
Map by Ginny (Ying Chi) Chan

Migration of Bar-tailed Godwit Y5RBRL cont.

Chris Hassell (GFN) and Emilia Lai (BBO) releasing Y5RBRL. You can see the antenna of her solar-powered satellite transmitters. Eighty Mile Beach, NW Australia, 15 February 2017. Photo: Ginny (Ying Chi) Chan

15 February 2017
A female Bar-tailed Godwit with colour-ring combination Y5RBRL was caught, had a satellite transmitter attached, and was released at Eighty Mile Beach, NW Australia.

19 April 2017
Y5RBRL left Eighty Mile Beach and made an impressive non-stop flight of more than 5,700 km to China. In five days she reached the Rudong coast (Tiaozini-Dongsha mud flats) in Jiangsu Province, where she stayed for about a week.

3 May 2017
She headed further north and reached Diaokou on the coasts of southern Bohai Bay on 3 May. Our field team reached Diaokou ten days later on 13 May.

15 May 2017
Our field team reports that they sighted a Bar-tailed Godwit carrying a satellite transmitter in Diaokou Xiang, Lijin County of Shandong Province. Yueheng (a volunteer fieldworker) saw this special bird with an antenna sticking out. It is very special to actually see a bird with a satellite transmitter in the field, thousands of kilometres away from where you marked it.

In Diakou: Bar-tailed Godwit "Y5RBRL" carrying a satellite transmitter. Photo: Ginny (Ying Chi) Chan

Diaokou in southern Bohai Bay has been sampled for benthic prey and surveyed for birds since spring 2016. Another tagged Bar-tailed Godwit had stopped there last year. Y5RBRL stayed in Diakou until 25 May, a total of 22 days. It seems to be an important staging site, although we did not see big numbers in either year. It is difficult to find and approach flocks there, because there are a lot of fishermen working on the mudflats and we only had three days to do our work. More regular surveys in this area will be very informative.
From Diaokou, Y5RBRL flew to her breeding grounds near Chersky in northern Russia. She didn't fly non-stop, she stopped at several places in the tundra. Was she looking for a mate or a good place to breed? Or waiting for the snow to melt?

7 June 2017
Finally she reached her breeding location! From our track we infer she stayed at this single site for 26 days. As our transmitters are in a cycle of 8 hours "ON" 25 hours "OFF", she could have been there for 28 days. It is very likely she attempted to breed but our movement data cannot confirm whether this was successful. The egg-laying takes four days and incubation takes 21 days, so if her chicks hatched successfully, she would have left them for her partner to take care of. For shorebirds, it is not uncommon that one parent leaves the responsibility of raising the chicks to the partner.

3 July 2017
After the breeding season she flew further north to the New Siberian Islands. She was at this site 'fuelling up' for almost 16 days, to get ready for her southward migration.

Migration of Bar-tailed Godwit Y5RBRL cont.

Now as we write this in mid-August 2017, Y5RBRL has returned to Diaokou for some more fuelling. Obviously Diaokou is known to her as a good site to prepare for migratory flights.

What we are wondering now is if she will use the Tiaozini-Dongsha mudflats again before flying to Australia. Why is that such an important question? This staging site, which Y5RBRL used as her first landing and refuelling place after her long-haul flight from Australia, is part of a huge 'reclamation' project and the mudflats will soon disappear. Ying Chi and colleagues used the local movements of Y5RBRL and 14 other tagged Bar-tailed Godwits to show that the planned industrialisation overlaps with the areas that the birds feed in on the Tiaozini-Dongsha mudflats and shoals. This result is presented in a Forum paper in Wader Study published by Global Flyway Network and colleagues in early August. We hope that the publication can urge the government to re-assess the plans. If we want to make sure Y5RBRL can keep using her favourite staging sites (and ca. 60,000 other godwits with her) action is needed.

Ginny (Ying Chi) Chan, Theunis Piersma and Chris Hassell *from Royal NIOZ Netherlands Institute for Sea Research, University of Groningen, The Netherlands and Global Flyway Network Australia*

Source:
https://teampiersma.org/2017/08/23/migration-of-the-bar-tailed-godwit-y5rbrl/
Posted on August 23, 2017 by Team Piersma

Marsh Award for International Ornithology to Theunis Piersma

In recognition of his scientific work on migration, ecology and evolution of birds and other taxa, Professor Theunis Piersma, of the University of Groningen and of the NIOZ Royal Netherlands Institute for Sea Research, has been awarded the prestigious Marsh Award for International Ornithology by the British Trust for Ornithology (BTO). The award, which is presented annually, is given to an individual scientist whose work on the international stage has had a significant influence on British ornithology.

Using Red Knots and Black-tailed Godwits as the main study species, Theunis and his group established a framework to predict the physical attributes and behaviour of individuals based on climatic, disease and food-related factors. His work has also focused on the evolutionary trade-offs involved in predation and anti-predatory behaviour across different species along the food chain. This work, in particular, holds high policy-relevance, as it informs on the risk of over-exploitation of marine areas as well as our countryside.

Professor Piersma was also one of the driving forces in establishing the Global Flyway Network, which focuses on long-term demographic studies of shorebirds to identify natural selection pressures on this beleaguered group of birds.

Dr Daria Dadam, BTO, said, "Theunis is a very worthy recipient of the Marsh Award for International Ornithology. His work on shorebirds has revolutionised the way we think about how these birds interact with the habitats they live and feed in. Without this we would have a much poorer understanding of just how important our marine areas are for them, and how even small changes can have consequences for these global travellers."

Professor Theunis Piersma said, "The Marsh Award is a fantastic recognition of what we have been trying to achieve as an international team, carefully deciphering the ecological factors determining their distributions and numbers, and what these epic migrants have to say about the state of our shared world. As deeply amazing the shorebirds are in their own right, they also have a role to play as the canaries in the global coal-mine."

As well as a leading academic, Theunis is a dedicated mentor to the younger generation of scientists. He has supervised 50 PhD students and 20 post-docs, and he and his team host visiting students and scientists from all over the World.

Source: **http://globalflywaynetwork.com.au/latest-news/** 20 October 2017

Their Future is Our Future

The Twelfth Session of the Conference of the Parties (COP 12) to the *Convention on the Conservation of Migratory Species of Wild Animals* (CMS COP12) is being held in Manila, the Philippines, from 23 to 28 October 2017 – the first time that the COP will ever have been held in Asia.

The slogan for the Conference is "Their Future is Our Future – Sustainable Development for Wildlife & People", links to the Sustainable Development Goals (SDG) agreed by the world's governments in 2015 to end poverty and hunger, improve health and education, combat climate change and protect oceans and forests. The CMS COP will place particular emphasis on the fact that migratory animals provide vital services that satisfy people's everyday needs – as a source of food and medicine, as pollinators and seed dispersers, and as a means of pest control. Migratory species can also fire our imagination with their majestic presence and beauty and inspire us with their intrepid journeys across deserts and oceans. COP12 presents an opportunity to place the cause of nature conservation centre stage in the wider debate about the future of the planet and the fate of its residents – human and animal. Delegates will be able to highlight the fact that global efforts to reach SDG will and must be beneficial for people and wildlife.

During CMS COP12, the Australian Government, BirdLife Australia, EAAFP and BirdLife International will host a side-event that brings together key stakeholders from across the EAAF to discuss the success of a number of Single Species Action Plans for threatened migratory waterbirds. Single Species Action Plans have been a key factor in improving the conservation status of threatened migratory waterbirds in the EAAF. The session will share experience and knowledge from the implementation of existing migratory waterbirds action plans in the EAAF – Spoon-billed Sandpiper, Chinese Crested Tern, Black-faced Spoonbill and Siberian Crane. The session will aim to introduce and build strong consensus towards the adoption of the two new action plans to be presented at CMS COP12 – Far Eastern Curlew and Baer's Pochard. It is expected that the side event will help galvanise action and improve coordination for the continued implementation of action plans in relevant range states on the EAAF.

Some of the main topics which the delegates will be tackling include proposals to amend the Convention's Appendices, finding solutions to the illegal killing, taking and trade of migratory birds, marine debris, climate change and bycatch. Crucially for Australian migratory shorebirds, agenda items also include promoting conservation of critical intertidal and other coastal habitats for migratory species and improving ways of addressing connectivity in the conservation of migratory species.

The role of CMS in protecting migratory species

As an environmental treaty under the aegis of the United Nations Environment Programme, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the Range States through which migratory animals pass, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.

As the only global convention specializing in the conservation of migratory species, their habitats and migration routes, CMS complements and co-operates with a number of other international organizations, NGOs and partners in the media as well as in the corporate sector. Migratory species threatened with extinction are listed on Appendix I of the Convention, including Far Eastern Curlew and Great Knot. CMS Parties strive towards strictly protecting these animals, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them. Besides establishing obligations for each State joining the Convention, CMS promotes concerted action among the Range States of many of these species.

Migratory species that need or would significantly benefit from international co-operation are listed in Appendix II of the Convention. For this reason, the Convention encourages the Range States to conclude global or regional agreements. In this respect, CMS acts as a framework Convention. The agreements may range from legally binding treaties (called Agreements) to less formal instruments, such as Memoranda of Understanding, and can be adapted to the requirements of particular regions. The development of models tailored according to the conservation needs throughout the migratory range is a unique capacity to CMS.

Mark Carey and Connie Warren
EAAFP Far Eastern Curlew Task Force

Community Conservation of Far Eastern Curlew

Far Eastern Curlew ©Eugene Cheah/EAAFP

Conservation Volunteers Australia has been awarded a grant for Community Conservation of Eastern Curlew under the Australian Government's Threatened Species Recovery Fund. The project will restore key habitats, reduce human disturbance and promote best practice at priority sites from Darwin to Wollongong. It will be a 2-year project completed in June 2019.

This is a partnership project led by Conservation Volunteers Australia (CVA) with BirdLife Australia, land managers and local communities. The team will restore 10 Eastern Curlew sites at 5 locations with significant curlew populations: Shoalhaven Estuary, Quibray Bay at Towra Point, Ash Island in the Hunter Estuary, Hays Inlet in Moreton Bay and Casuarina Coastal Reserve at Darwin. The project will address two key threats: habitat degradation & human disturbance.

CVA's mission is to inspire change by connecting people with nature. Community volunteer teams will be engaged to improve priority habitat by controlling weeds, removing mangroves under licence, clearing marine debris, revegetating saltmarsh buffers and closing unauthorised access.
"Eastern Curlew is such an easy bird to love," says Project Manager Louise Duff. "They're big, unmistakable and easy to spot and identify. The story of their epic journey from Siberia each year captures people's imagination." Ms Duff is looking forward to running community events at each location to educate beach users to appreciate and stay clear of these critically endangered long-haul fliers.

BirdLife Australia will be the Science Partner, providing monitoring and technical advice with support from the Australasian Wader Study Group and Shorebirds 2020 program. "Community monitoring groups are the backbone of shorebird conservation," said Ms. Duff. "The data they provide helped us prioritise the best sites for the project. We look forward to working with the local groups and engaging new volunteers in monitoring surveys for Eastern Curlew." Midway through the project, CVA and BLA will host local stakeholder workshops to provide land managers with the latest research and data to inform decision making and land-use planning.

Ms Duff recently spent a week working at the East Asian-Australasian Flyway Partnership (EAAFP) in Incheon, South Korea. "The project team will be preparing guidelines on community conservation of shorebird sites. The EAAFP will help make the guidelines relevant flyway-wide and disseminate them through their communication channels."

Community conservation of Far Eastern Curlew will contribute to the shorebird conservation targets of CVA's Revive Our Wetlands Program. It aligns with BLA's forthcoming Conservation Action Plan for shorebirds and will help achieve the Australian Government's policy commitment to reverse the decline of threatened species.

Louise Duff
Program Manager – Wetlands Catchments Coasts at Conservation Volunteers Australia
For more information contact via email: **lduff@cva.org.au**.

Far Eastern Curlew ©Eugene Cheah/EAAFP

Leg-flag sightings from the EAAF 2017

To date 2017 has been an exciting year with very many flag resightings from across the East Asian-Australasian Flyway. The following provides an overview of some of the highlights reported.

From within Australia:

January 2017 got off to a flying start when David Edwards and Robert Bush recorded a Blue/Green Red-necked Stint from Mongolia at Fisherman Island, Queensland! Relatively few birds are (as of yet) flagged in Mongolia and so a resighting was quite a feat.

No fewer than 10 observations of Japanese-flagged shorebirds were reported in February 2017 from Queensland (Queensland Wader Study Group - QWSG) and Broome (Clare and Grant Morton). Nine of these involved Grey-tailed Tattlers (including three engraved leg flags, ELFs) and a single Blue/White Red-necked Stint with an ELF, originally banded at Yatsu Tidal Flat, Tokyo Bay, Japan in September 2014.

Highlights for March 2017 were too many to put in print, but the return to Broome of White/Black Great Knot N1 (originally banded in October 2007 in Chongming Dao, China) and leucistic Greater Sand Plover Yellow LBR were particularly exciting (Clare and Grant Morton). In the Northern Territory, Gavin and Meg O'Brien continued to record substantial numbers of Kamchatka and Chongming Dao ELFs on Great Knot, with QWSG again reporting Bar-tailed Godwit Green/Orange 2BWYY, bringing the total to over 50 records since 2012 for this individual banded in Yalu-Jiang, China.

April is traditionally a slower month in Australia as birds begin northbound migration again and 2017 was no exception in that regard. Nonetheless, recording Red Knots from Chongming Dao, Bohai Bay, the Gulf of Thailand and Southern Chukotka in a single session in Roebuck Bay (where else?) by Maurice O'Connor and Adrian Boyle was rather impressive.

The vast majority of resightings from May to July 2017 involved birds ready to spend the winter in Australia, with one exception: Lois Wooding knocked it out of the park by recording Grey-tailed Tattler LMBW (Lime Metal / Black White) in Swan Bay, Port Stephens in New South Wales. LMBW appears highly site-faithful in both its breeding and non-breeding sites. A presumed male, it was first banded in 2012 in Southern Chukotka and (with one exception) has successfully bred in the same territory every year since then (pers. comm. P. Tomkovich). It has been recorded staging in Swan Bay every autumn since 2014.

From outside Australia:

Too many observations were received from across the flyway to do justice here, but some do stand out. Special mention must go to Alaska: in May 2017 Barbara Lestenkof recorded Bar-tailed Godwit Orange CRW on St Paul, part of the Pribilof Islands. CRW was first banded as an immature in June 2015 on Barry Beach, Corner Inlet, a vast estuary in southeast Australia and had been seen in the same area in November 2016.

Subsequently a Victorian-flagged Red-necked Stint was seen in Nome, Alaska in June 2017 by Steve Hampton, the first such observation recorded.

Given that the Pribilofs consist of two inhabited islands in the Bering Sea, what were the chances of recording another Australian-flagged shorebird in the same season? Nat Drumheller did just that when spotting Whimbrel Green CJX in June 2017. First banded as an adult in November 2016 near Brisbane, Queensland, Australia, this was the bird's first overseas resighting!

Another 'island gem' was recorded from the Northern Peleliu Sandflats IBA in Palau where Glenn McKinlay found a Ruddy Turnstone banded at Torinoumi in Japan.

Recent banding efforts on Kamchatka at the Khairusovo and Belogolovaya estuaries by Dmitry Dorofeev and colleagues are really starting to pay off, with numerous resightings of birds with Black/Yellow flags (left tibia, yellow flag engraved) received from South Korea, Taiwan, NW Australia and Northern Australia. Keep a lookout for Dmitry's birds!

Joris Driessen
Manager, AWSG Flag Database

Red-necked Stint with a plain orange Victorian leg-flag at Port Stephens, NSW in 2014 - how much more we can learn from engraved leg flags!
Photo by Steve Merrett

Leschenault Estuary Western Australia Shorebirds

Figure 1 - Leschenault Estuary, north of Bunbury, Western Australia

Leschenault Estuary is an estuarine lagoon situated to the north of **Bunbury, Western Australia**. The estuary is about 13.5 km in length with a maximum width of around 2.5 km. It contains a number of tidal salt marshes. The **Collie** and **Preston Rivers** are the main rivers entering the estuary. The shorebird sites covered in this article are at Point Douro and the Preston River mouth (see **Figure 1**).

Point Douro is located at the mouth of the Collie River, where a large sandbank is exposed at low tide. The area comes alive over summer with hundreds of shorebirds, up to 20 species. It is easily accessible to the public and indeed four-wheel-drive vehicles and dogs are regulars here. The site becomes inundated at high tides and man-made channels allow ingress and egress of estuary water. Salt bush, some small shrubs and a few Tuarts (tall trees) grow in the area.

Preston River mouth - the Preston River has been diverted a couple of times and there is an adjacent lagoon which was created when port dredging was in progress. This is now being colonised by the local White Mangrove *Avicennia marina*. The river delta spreads out for several hundred metres at low tide. The mudflats become a feeding ground for many migratory and some resident shorebirds. Three species of terns, gulls and other waterfowl (herons, swans, egrets, ibis) have been seen here.

Leschenault Estuary is one of the most southern shorebird stopover sites on the West Australian coastline. Shorebird numbers have been monitored at these sites since 2013. The majority of the observations were made at Point Douro with a lesser number made at the Preston River mouth. The sites were monitored once a week/fortnight.

I have observed twenty different migratory shorebird species and most observations were made between September and March. Red-necked Stint, Grey Plover, Bar-tailed Godwit and Common Greenshank were the most abundant species observed.

Migratory shorebirds

The annual maximum counts of shorebirds at Point Douro and the Preston River mouth from 2014 to 2016 are shown in **Table 1**.

Bar-tailed Godwit *Limosa lapponica* first arrive in October and maintain a presence through till May. Maximum number observed was 24 in January 2017. Numbers generally between 4 and 10 birds.

Grey Plover *Pluvialis squatarola* arrive from August onwards. Point Douro maintains a stable population of Grey Plover over the summer period of 10-15 birds. A maximum of 24 Grey Plover were seen in late March 2016.

Red-necked Stint *Calidris ruficollis* arrive from September onwards and have largely gone by the end of February. Numbers are highest over the months September to December when a couple of hundred Red-necked Stint are present.

Common Greenshank *Tringa nebularia* arrive in September and have been reported till

Leschenault Estuary Western Australia Shorebirds cont.

May, making them present nearly year-round. Numbers are in the lower range of 1-4.

Resident shorebirds

Resident shorebirds present were Red-capped Plover, Australian Pied Oystercatcher, Black-winged Stilt and Red-necked Avocet. Black-winged Stilt and Red-necked Avocet populations fluctuated during the year. Small flocks (20-50) of Red-necked Avocet have been sighted, though are not present each year.

Australian Pied Oystercatcher breed each year around the Leschenault Estuary, sometimes in unusual places. One nest was found alongside a disused railway line, another on a coal stockpile at the old Bunbury Power Station. Australian Pied Oystercatcher has been recorded breeding near the Dolphin Discovery Centre, Bunbury, 20/10/2014.

Red-capped Plovers have been observed breeding. In the past, before the dredging of the Inner Harbour, many Black-winged Stilts nested in the saltbush along with White-fronted Chats and Little Grassbirds. The former breeding area is now unrecognisable.

A few vagrant shorebird species have been recorded. I have seen the occasional but infrequent Wood Sandpiper, Terek Sandpiper, Grey-tailed Tattler and once a Ruff. The Ruff was sighted on 6 and 23 November 2016.

A juvenile Eurasian Curlew remained at Point Douro for a lengthy period, from 23 February 2016 to 27 March 2017, and was in the company of one or two Eastern Curlew.

Migratory Shorebirds	**2014**	**2015**	**2016**
Bar-tailed Godwit	2	10	13
Whimbrel	1	2	1
Eastern Curlew	2	2	2
Terek Sandpiper	4	2	1
Common Sandpiper	1	3	3
Grey-tailed Tattler	3		2
Common Greenshank	10	8	4
Wood Sandpiper	1	2	
Ruddy Turnstone			3
Great Knot	8	10	13
Red Knot	4	2	10
Sanderling			1
Red-necked Stint	235	203	300
Sharp-tailed Sandpiper			5
Curlew Sandpiper	2		70
Ruff			1
Grey Plover	15	17	24
Pacific Golden Plover	1	1	1
Greater Sand Plover	1	2	4
Resident shorebirds	**2014**	**2015**	**2016**
Australian Pied Oystercatcher			2
Black-winged Stilt	23	30	
Red-necked Avocet	50	50	20
Red-capped Plover	8	11	16

Table 1. Highest annual shorebird counts from Point Douro and the mouth of Preston River in the Leschenault Estuary 2014-2016.

Don Carlson
2 October 2017

Southward Migration Wader Studies on West Kamchatka 2017

In July–September 2017 we continued our study of southward wader migration on the western coast of Kamchatka Peninsula, Russia with the support of BirdsRussia using RSPB financial support. These investigations were in the same area as the three previous years. Field work was carried out on Vorovskaya River Lagoon on 3–26 August. The lagoon is 40 km long and 1–1.5 km wide. We investigated only the southern part of the lagoon between Ustyevoe Village and the mouth of the river (54º 11' N, 155º 49' E). The length of this part is about 5 km.

As in previous years, our work included daily counting of mudflats during low tide, observation of visible migration with counting of birds flying past, banding and flagging. Twenty-one mudflat counts of waders during low tide were conducted and 29 species of waders were recorded in total. The maximum number of waders – 7,300 individuals – was counted on 10 August 2016 (**Figure 1**). The average count was 3,300 individuals; it is much lower than in 2014 and 2015 and about the same as in 2016. Last year the reason was uncommonly rainy and windy weather in the first three weeks of August. But this year was very good for migration. Shorebirds could leave our lagoon and fly to Sakhalin on any day, as the strong wind was absent for the entire period.

In 2016 the international significance of the study area has been confirmed for 7 wader species: Whimbrel (maximum count was 1.8% of total population on EAAF), Red-necked Stint (1.3%), Mongolian Plover (0.8%), Black-tailed Godwit

Southward Migration Wader Studies on West Kamchatka cont.

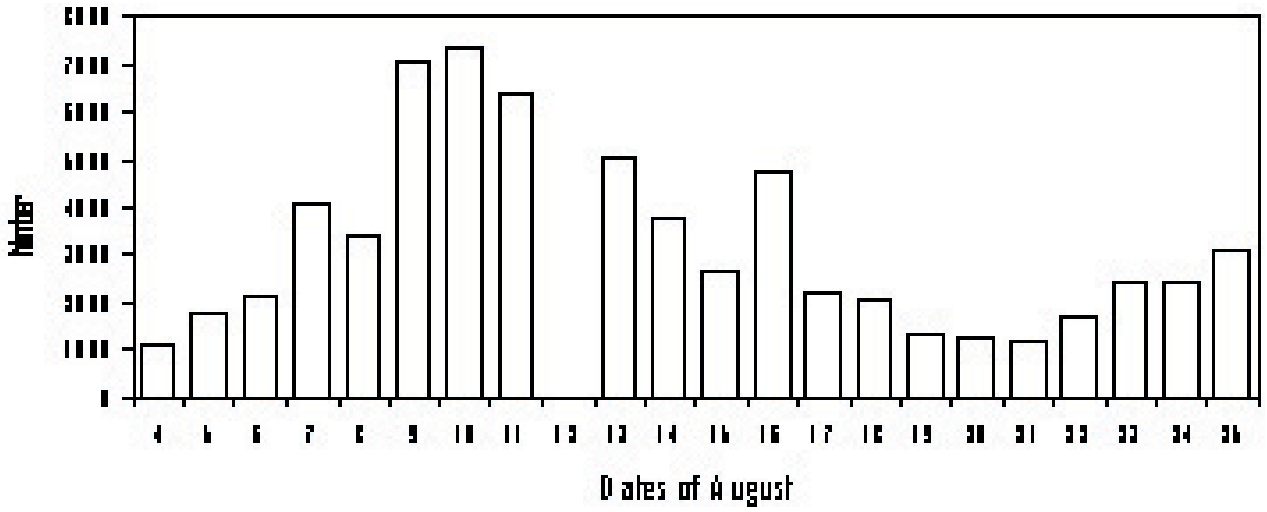


Figure 1. Daily count of waders (all species together) on mudflats August 2017

(0.4%), Dunlin (0.3%), Ruddy Turnstone (0.3 %) and Spoon-billed Sandpiper.

During 4–26 August, 1444 waders were banded and flagged, including 870 Dunlin, 529 Red-necked Stint, 14 Great Knot, 10 Western Sandpiper, 7 Spoon-billed Sandpiper, 4 Terek Sandpiper and a few others. One Red Knot and one Short-billed Dowitcher were banded for the first time on Kamchatka.

Y. Gerasimov, R. Bukhalova and A. Grinkova.

In search of the elusive Spoon-billed Sandpiper

It's my last day in Busan, South Korea. I've been here for a 3-day meeting of wetland NGOs at the cavernous City Hall in my role as Chair of the World Wetlands Network (WWN). Delegates from Ramsar Network Japan, the Korean Wetlands NGO Network and Wetlands and Waterbirds Korea are going their separate ways.

Jacky Judas from the Emirates Wildlife Society - WWF in Dubai is with me. He's been advising us about the wetland and NGO scene in UAE to help us prepare for the next Ramsar Conference of Parties, which will he held there next year. Jacky is a PhD biologist and keen ornithologist who wants to spend his only free day in the country birding. I'm not an experienced birder. My work focusses on environmental project management for Conservation Volunteers Australia, and stakeholder engagement in my role with WWN. I'm a certified "plant nerd." But I'm becoming increasingly addicted to birding and brought my binoculars on an international trip for the first time – taking up precious real-estate in my suitcase. I'm in!

This is not just any birding expedition. Our mission is to spot the incredibly rare Spoon-billed Sandpiper. According to the EAAFP Spoon-billed Sandpiper Task Force, this little shorebird is one of the most threatened birds on the planet. Each year it breeds in the Russian Far East, migrates through Russia, Japan, North Korea, South Korea and China to winter in southern China, Bangladesh, Myanmar and Thailand, 8,000km from its breeding grounds. The species declined from an estimated 2,000-2,800 breeding pairs in the 1970s to 1,000 pairs in 2000 to less than 250 pairs in 2014.

Our Korean host, Mr Kuncheol Kim has been monitoring Spoon-billed Sandpipers here in Busan for the past few years. His sightings have fallen from an average of ten per year, to three this year. Just last week a solitary bird was seen on Doyo Island. We're in with a chance!!

Our guide is Mr SungBae Park, head of the education program at Nakdong Estuary Eco Centre. Lucky for us the centre is closed Mondays and SungBae is only too happy to take us birding on the estuary.

We pile into a zodiac inflatable with a tiny 15 HP outboard and motor 40 minutes across the shallow bay to Doyo Island. Once there we cruise along the shore observing a big mixed flock of Eurasian and Far Eastern Curlew. Their distinctive calls drift on the breeze. Curlew are the biggest shorebird and also one of the quickest to take flight when disturbed. Being in the boat skimming past with our quiet little motor they barely notice us. We get a good look - the Eurasians with pale

In search of the elusive Spoon-billed Sandpiper cont.

rumps, the Far Eastern a darker brown. I'm surprised how fast they run!

We cruise to another spot and see a flock of Pacific Golden Plover, Terek Sandpiper, a lone Bar-tailed Godwit, and Spotted Greenshank. Where there's shorebirds there's predators. A Black Kite perches on a log nearby and an Osprey sits on a fishing pole. We search the flock for Spoon-billed Sandpiper. I look high. I look low. I look in the centre of the flock, I look on the edge. I look for outliers. No luck.

Once ashore I'm surprised to see footprints of Chinese Water Deer and Racoon Dog. There's loads of fishing rubbish – floats, buoys, nets and traps. The beach is strewn with large white cockle shells, some as big as my hand. Red Ghost Crabs side-step back and forth, excavating their homes and scooping up food.

There is a large flock of Lesser Sand Plovers, some juveniles running and hunting. A group of five Dunlin sit in a depression in the sand with their backs to us. Spoon-billed Sandpiper? No. We walk along the beach and Jacky sets up his scope, training it on a large mixed flock with hundreds of shorebirds. There are 200 or so Red-necked Stint. SungBae says they counted over 1000 last week. Jacky is an expert birder, showing us Sanderlings, Ruddy Turnstones, and about 50 Kentish Plovers amongst the Lesser Sand Plovers. He shows me how to spot them, with their smaller bill and broken banding on the collar.

Excitement!! A Peregrine Falcon soars in like a bullet, putting the whole flock up. They wheel and spin to evade the predator. The flock fly as one, flashing past us. It's an incredible site! Then - even better! They land in front of us, right on the watermark. A Hobby joins the hunt and they take to the sky again. We watch the breathtaking sight until they settle again, further down the beach.

We see a pair of Broad-billed Sandpiper with a distinctive black band on top of their heads and double streaks at the eye. The Pacific Golden Plovers are in golden breeding colours, much different to the plumage I'm used to seeing in Australia. They look big against the sandpipers. I watch one with a juicy dragonfly in its beak, which it smacks against the ground a couple of times then eats.

The sea breeze comes in and the waves pick up. SungBae says we'd better go. Intensely, we scan the beach for that elusive, rare, lonely Spoon-billed Sandpiper. It could be here, right now! But we don't find it. None-the-less, it has been

Mr SungBae Park, Louise Duff and Jacky Judas searching for Spoon-billed Sandpiper. Photo Mr Kuncheol Kim

a wonderful day of birding. We walk back across the island and push off in the Zodiac. Motoring back across the bay the Peregrine Falcon flies right above us and pauses as if to show us the fish he's holding in his talons. The Osprey launches itself from its post and flies off down the coast. The sea is teeming with silver fish leaping out of the water and flashing in the sun. SungBae comments "they say catch me if you can! Sometimes they jump into the boat!"

Looking towards the mainland it's bristling with tower apartments. We can see massive bridges, freeways and the Estuary Dam, constructed in 2012 and stopping the mixing of salt and freshwater essential to the estuary ecosystem health. With all the development going on in South Korea it's good to know conservationists are campaigning to conserve nature. Through their efforts, President Moon Jae-in from the Democratic Party of Korea, made an election promise to open the Estuary Dam gates and restore the Nakdong River. He was elected this year and the government are now taking important steps towards the restoration. The Municipal Government of Busan has pledged their support. NGOs understand the process will be complex, with competing interests and a range of environmental, social and economic issues to be considered. They are working with the government and maintaining pressure to ensure this valuable estuary is restored for shorebirds, fish and the community. I hope the restoration of the Nakdong River Estuary is a success, and the habitat for the Critically Endangered Spoon-billed Sandpiper visiting here every year is increased. Maybe next time we visit we will spot this elusive, rare, precious little shorebird.

Louise Duff
Chair World Wetland Network

Shorebirds 2020 Update

Introduction
After a significant amount of time with limited resources, Shorebirds 2020 has finally received additional capacity and we are now in the process of implementing project actions which we have been trying to do for the past 5 years.

Connie Warren has joined the Migratory Shorebirds team based in BirdLife Australia's national office as the Shorebird Conservation Coordinator. As part of this role, she leads on migratory shorebird-related conservation advocacy, coordinates BirdLife Australia's Migratory Shorebird Conservation Action Plan and assists the Shorebirds 2020 Program Manager with other program deliverables, including monitoring and engagement. Connie is also the Coordinator on the East Asian-Australasian Flyway Partnership's Far Eastern Curlew Task Force, which oversees and supports the delivery of the International Single Species Action Plan for Conservation of the Far Eastern Curlew.

Summer Shorebirds 2020 Count and alignment with the Asian Waterbird Census
The main annual summer count is now upon us, being scheduled as is customary for 15 January 2018. This year we are encouraging counters and count coordinators to schedule and conduct their counts **in the month of January**. If you are scheduling a count survey, try to aim as close to 15 January as you can - it is a good idea to try to have your summer counts completed before the end of February.

We are asking surveys to be conducted in January as it aligns with Wetlands International's Asian Waterbird Census. The Asian Waterbird Census (AWC) is part of the global International Waterbird Census (IWC). This citizen-science program is supporting conservation and management of wetlands and waterbirds worldwide. The information helps to promote the designation and management of internationally important sites such as nationally protected areas, Ramsar Sites, East Asian-Australasian Flyway Network Sites and Key Biodiversity Areas (KBAs) as well as identifying and protecting new sites of importance for waterbirds.

The recommended dates for the AWC 2018 counts are Saturday 6 to Sunday 21 January, covering two weeks and three weekends. These dates are for guidance only and counts from any date in January are also accepted.

Chances are there is a Shorebird Area near you regardless of where you live, especially if you are situated in proximity to the coast. To see if there is a site near you, all you have to do is visit the Birdata website, and zoom to your local area.

Each designated "Shorebird Area" in most cases will have a nominated site coordinator; someone who schedules the surveys and coordinates a team of counters, especially at the larger sites. If you are keen on getting involved and helping with surveys, and don't know where to begin can you please email **shorebirds@birdlife.org.au** beforehand so we can put you in touch with the local survey coordinator(s) in your area.

To join Shorebirds 2020 or get involved again and be updated on volunteer opportunities, training workshops and to get involved with field work please contact **shorebirds@birdlife.org.au**

Shorebirds 2020 Network Audit
Given there has been much going on in migratory shorebird circles, we haven't had anywhere near enough time to keep on top of the Shorebirds 2020 network and are therefore slightly out of touch when it comes to knowing what is happening where and when, or more importantly, what isn't happening any longer. Through the delivery of the Update of Flyway Population Estimates project, and more recently, a NSW Government shorebird habitat prioritisation project, several survey coverage gaps have become more apparent than ever – e.g. Northern Territory, Kimberley Coast, Gulf of Carpentaria, Inland Australia; but also some sites around populated areas which have not been surveyed for some time. The data collation process that was instigated by the flyway population estimates revision project has also highlighted a number of important sites around the country which now have patchy survey coverage, or ceased survey coverage.

A key focus of the program will be addressing these gaps in the upcoming months. We are hoping to conduct a comprehensive network audit, where we will be checking the status of the site and state coordinator network, as well as the accuracy of mapped survey areas and site nomenclature in the database. To address this, over the next month or so, we are aiming to touch base with all existing survey area coordinators and identify locations which no longer have an active coordinator. Similarly, we will be asking for specific information about each Shorebird Area, namely:

- Are you still actively involved and at what capacity?
- What is the best method of communication?
- How many volunteer counters are required to complete a survey of the Shorebird Area you coordinate?

Shorebirds 2020 Update cont.

- Support requests; would a Public/ Community workshop help identify new surveyors; also local school workshops?
- Where is your survey data being entered/ stored at the moment?
- Have you got a lot of survey data that hasn't been entered yet?
- Birdata – have you registered/ transferred your old S2020 database account yet? Is any assistance required?
- Are shorebird and count areas in your area mapped correctly? Do they need updating?

If you can have a think about these points that would be most appreciated. Please also be aware that we will be getting in contact with all existing survey area coordinators **by phone or in person** (if we can) over the coming month or so prior to the commencement of the summer survey window.

***Stilt* Summaries - Reminder and request for outstanding shorebird count data**

Last published 09/10, this is a priority in the current project. We are still in the process of bringing these summaries up to date and will be in a position to issue them in a timely manner on an annual basis in future; the delays are attributed to the Birdata system and a change in the way outputs are managed. In recent weeks a specific *Stilt* Summary export query has been developed in the new Birdata system which allows us to produce the *Stilt* summary at the click of a button.

To produce the report, we query the Shorebirds 2020 database for the shorebird data collected in each Count Area during a specified count date window. These query results are then used to calculate:

- State total per species
- National total per species
- Total number of birds overall, number of species represented and number of shorebird areas contributing to totals
- Number of shorebird areas counted per state compared to total number of shorebird areas per state.

These outputs are presented in a large excel spreadsheet: one for state summaries – which include the summed results for each shorebird area; and a larger one which sums all the state totals to produce the final total per species. Once done, this will allow for efficient production of annual summaries for publication in *Stilt*.

In order to undertake this work, we need as much Australian shorebird count data as we are able to find. As such, if you have any outstanding surveys or counts that have not yet:

- been submitted to Shorebirds 2020 by post (if on paper), or
- been entered into the Shorebirds 2020 section of the Birdata portal,

it would be most appreciated if you could do so before 30 October 2017.

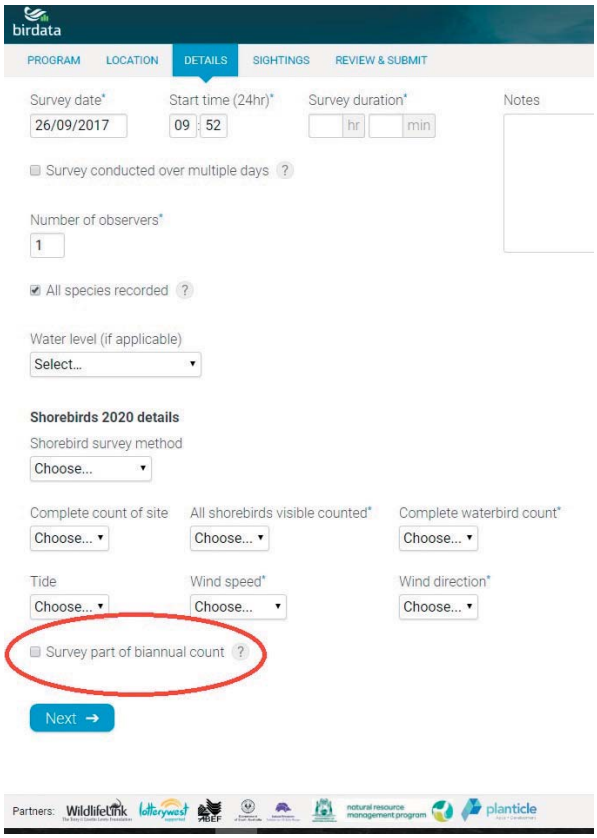
If you need any assistance at all to do this please get in contact with me **dan.weller@birdlife.org.au**, or Connie **connie.warren@birdlife.org.au**

Birdata Updates

Birdata houses the Shorebirds 2020 database. Birdata is constantly receiving upgrades and additions to make it more user-friendly and useful for shorebird surveyors, and birding more generally. If there are any specific additions that you would like to see integrated into Birdata to make it more useful to you please get in touch with us.

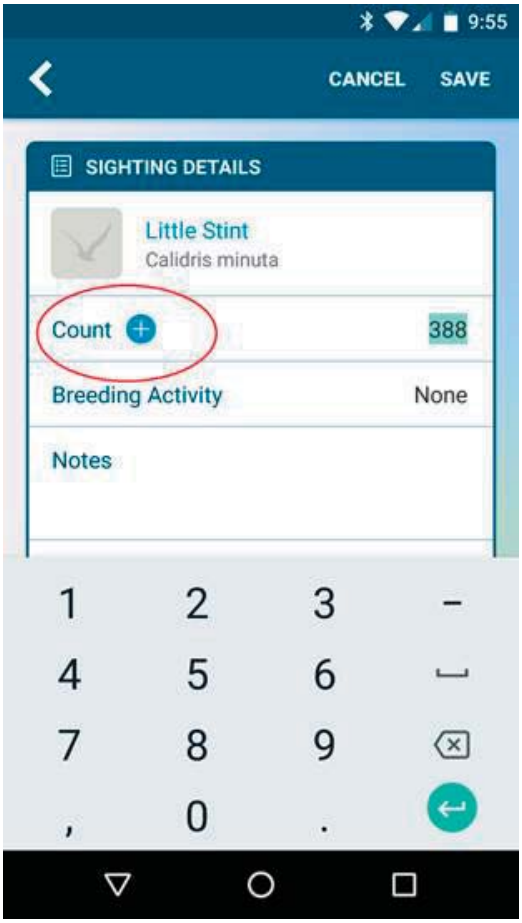
Some additional things to take into consideration:

When you have conducted one of the two main annual counts and are entering the data into Birdata (either the Summer or Winter count) please be sure to tick the "SURVEY PART OF BIANNUAL COUNT" checkbox. See screenshot below.



Shorebirds 2020 Update cont.

Also worth noting is that in the Birdata app, you are now able to do cumulative counts of the same species. If you have recorded a count number for a species in a survey already, but then see more of that species, simply go to that entry, hit the '+' button next to 'count' and add more of that species and the App will do the calculation for you automatically.



If you had a previous account for the Shorebirds 2020 data portal and had entered data there, all your data is waiting for you in Birdata, all you have to do is sign up for a Birdata account and your historical data will be transferred to your new Birdata account.

Directory of Important Habitat for Migratory Shorebirds in Australia project

Thirty-seven species of migratory shorebird regularly and predictably visit Australia during their non-breeding season, from the Austral spring to autumn. In late 2016, a revision of the flyway population estimates of the 37 migratory shorebirds species routinely visiting Australia was completed by a team of migratory shorebird experts (Hansen *et al.* 2017). This was a very high priority action identified in the Australian Wildlife Conservation Plan for Migratory Shorebirds (WCP), under Objective 4, which involves addressing knowledge gaps in migratory shorebird ecology. As the population estimates form the basis for threshold-based conservation designations, their accuracy will better improve conservation decisions (e.g. to guide identification of important habitat under the WCP).

The next key step in the implementation of the WCP involves the creation of a Directory of Important Habitat (sites) for Migratory Shorebirds in Australia, which is explicitly identified in the WCP under Objective 2.

Coordinated by BirdLife Australia, Australia's current national shorebird monitoring program – Shorebirds 2020 – consists of a network of 464 monitoring areas around the country. It has recently expanded its monitoring coverage to include remote and sparsely populated areas in northern Australia, particularly in the Gulf of Carpentaria region, and provides the ideal foundation upon which to commence this important project.

The previous assessments of sites of importance focused on international significance criteria only (Watkins 1993, Bamford *et al.* 2008), and identified 118 areas of international importance within the country (Bamford *et al.* 2008). With a significant increase in the number of monitoring sites included in the Shorebirds 2020 program, and subsequent increase in amount of contemporary population monitoring data, there are likely to be many additional sites meeting the importance criteria.

An **internationally important** area is a site that regularly supports:

- 1%of the individuals in a population of one species or subspecies of waterbird; or
- a total abundance of at least 20,000 shorebirds.

Nationally important habitat for migratory shorebirds is a site that regularly supports:

- 0.1 per cent of the flyway population of a single species of migratory shorebird; or
- 2000 migratory shorebirds; or
- 15 migratory shorebird species.

The Shorebirds 2020 database will be updated prior to a complete database extraction. Similar to the Flyway Population Estimates revision (Hansen *et al.* 2017), this will include targeted engagement with regional counters to:

- instigate surveys in areas which had not been covered in recent years;
- obtain and enter current data from areas which had been surveyed in recent years but not yet been submitted; and
- seek current data for areas that are housed in alternative or other regional and state databases.

Shorebirds 2020 Update cont.

Similar to the layout of Bamford *et al.* (2008), the directory will be split into two main components, the first focusing on species accounts and the latter site by site accounts. The species accounts will present the information collected on each of the 37 species within Australia. They will be presented in a consistent format for each species in sections as outlined below and will appear in taxonomic order based on the BirdLife Australia Working List. Site accounts will provide a description of each site, present the information on species occurring at the site in internationally or nationally significant numbers and identify active threatening processes and management status.

Just to reiterate an earlier point: in order to undertake this work, we need as much Australian shorebird count data as possible!

As such, if you have any outstanding surveys or counts that have not yet:

- been submitted to Shorebirds 2020 by post (if on paper), or
- been entered into the Shorebirds 2020 section of the Birdata portal,

it would be most appreciated if you could do so before 30 October 2017.

If you need any assistance at all to do this please get in contact with me **dan.weller@birdlife.org.au**, or Connie **connie.warren@birdlife.org.au**

Dan Weller

Changing of the Guard at the VWSG

This year's AGM for the Victorian Wader Study Group (VWSG) was a momentous one because after four decades, the tireless Clive Minton decided he needed a rest. In his early 80s, Clive has become increasingly unable to fulfill the monumental tasks that he has been carrying out over the last 40 years.

He has now reached a point where his memory is affecting what he does so much and his physical limitations are such that he has to pull back out of operational matters to do with VWSG (except trundling out to catches whenever he can of course) and the immediate impact of this is that we have had to remodel the way the VWSG will operate into the future.

At the AGM (26 August 2017) a new structure for the organization was agreed that spreads the load that Clive has shouldered for all these years.

The main changes relate to the need:

- for an executive committee to meet and run the organization in a more formal way;
- to have an advisory committee specifically tasked with setting the research priorities for the VWSG and to push for analysis and publication of the data we are gathering (Chaired by Danny Rogers); and
- for a wide group of people to be responsible for all aspects of the organization.

I must say how indebted we all are to the huge effort Clive has put in over these past four decades. This edition of *Tattler* could be filled with material covering his contribution. However, he has been recognised with the first VWSG life membership some years ago and has had his local and global contribution to wader studies documented in the book "*The Father of Wader Studies*" (available on the VWSG website **http://www.vwsg.org.au/PDFs/Mintontales.pdf**), so all we have left is to strike some form of annual award/recognition to a member of the VWSG that will survive in Clive's name. How this appears is yet to be determined so any ideas are welcome.

Clive Minton with Ruddy Turnstone 'CDT', caught at Beachport, SA in 2013.

Fortunately for all of us involved in the VWSG and beyond, Clive is still at the end of an email or phone so we can continue to utilise his enormous knowledge and skills as we adjust to the new order of things. He continues to be involved with the scientific committee and some other areas, with an emphasis (hopefully) on writing up our results.

Changing of the Guard at the VWSG cont.

While this is the end of an era, it is the start of the future, so we will all be pulling together to continue the great work of the VWSG. My role as Chair will be very different to Clive's but my efforts will be focused on our continuing to work productively in the field, thus building greater understanding of the issues affecting the changing fate of the birds, analysis and publication of our growing volume of data, promoting the achievements of the group, encouraging recruitment and for everyone to continue to enjoy each other's company.

Please feel free to offer suggestions about anything to do with the group through the newly established email address **chairvwsg@gmail.com**.

A big three cheers for Clive – hip hip, hooray - hip hip, hooray - hip hip, hooray.

Rog Standen
Chair VWSG
chairvwsg@gmail.com

Wing Threads - Flight to the Tundra

Another instalment in Amellia Formby's preparation for her Flight to the Tundra – compare this with the preparation by juvenile shorebirds for their first migration…

Last month I spent an exciting couple of weeks working in NSW's beautiful Lake Macquarie at the AirBorne microlight factory. AirBorne was started in a three-car garage in the 80s by the Duncan brothers - Shane, Ricky and Russell - later joined by hang glider pilots Rob Hibberd and Paul Mollison. Since then, AirBorne has grown to become a world leader in the design of microlight aircraft. The factory is just south of Newcastle and their flight training school is at the newly established Lake Macquarie Airport (YLMQ) where they test fly newly built aircraft.

During my stay, I got to fly the new AirBorne M3 Sport beastie with an MR-K wing over the beautiful Lake Macquarie coastline, seeing humpback whales and soaring above Sea Eagles and Swamp Harriers. In the back seat helping me out was Russell's son, Rory Duncan, who had just returned from Brazil where he competed as part of the Australian team in the World Hang Gliding Championships. Rory was an excellent instructor with an unshakeable nerve who was kind - or perhaps brave - enough to take me up in very turbulent conditions at all times of the day so that I could build up my skills.

From day one Rory had me working hard - it was a little bit like a 'baptism by turbulence'. Some days I could barely lift my arms after we landed they were so tired from physically controlling the aircraft, but I loved every minute! Within just two weeks, I experienced flying over water and hilly terrain, in sea breezes, convergent winds and landing in strong crosswinds with rotor coming off the trees lining the Lake Macquarie runway. Easily the most memorable though was my last day with Rory doing 'touch and go's' (circuits) during the middle of the day on a grass 'airstrip' at Hexham, that was little more than a mown area in a paddock covered in cow poo. Thankfully there were no cows on the runway that day but there were many small, punchy thermals going off to keep us awake - some of them up to 1000ft/min! Most satisfyingly, at the end of the two weeks, I was nailing my landings in these challenging conditions and my confidence levels improved immensely.

At the factory, I helped with both the assembly of the trike bases and wings (which felt a lot like playing with Lego or Meccano all day) and was also able to test fly one of the wings with Rory that I helped assemble. This experience certainly gave me a new appreciation for how the aircraft is put together and ensuring everything has been checked and rechecked before taking it up in the air!

Being able to work with pioneers in the field of recreational aviation like the Duncans was such a privilege. I am therefore very excited to share with you that I will be returning to AirBorne in January to work part-time until mid-next year! This will allow me to earn a living while learning all the ins and outs of the aircraft and being able to continue flying on a much more regular basis. A big thanks to Shane, Ricky, Russell, Mollo and Rob for generously offering me this opportunity. Special thanks must also go to Russell for helping to organise working at the factory, to Phil for lending me his caravan as my home-away-from-home at the airport for two-weeks and to Rory for sharing his mad flying skills!

Thanks must also go to all of you who kindly donated during the crowdfunding campaign as I am also about to put a deposit on an AirBorne XT 912 microlight, which will bring me one step closer to having an aircraft of my very own!

Amellia Formby | MSc, BSc (Zoology) *Uni Melb,* BVA (Tapestry) *Monash*
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The Overwintering Project

Mapping Sanctuary

The Overwintering Project is an environmental art project inviting artists and communities around Australia and New Zealand to respond to the unique nature of their local migratory shorebird habitat. Australia and New Zealand have over 100 internationally important shorebird overwintering sites. These sites are not interchangeable: each has a unique combination of features that make it the perfect sanctuary for migratory shorebirds to return to, year after year.

Councils, schools, BirdLife groups, NPWS services etc. that have an interest in raising awareness of their local migratory shorebirds and shorebird habitat are invited to organise Overwintering Project exhibitions. Exhibitions will be documented and publicised through the soon-to-be-live project website and Facebook page. The benefit of joining the project is that it will build a national picture of co-ordinated events to illustrate how migratory shorebirds depend on habitat throughout Australia and New Zealand.

The project is designed to be organic: Overwintering Project exhibitions could feature students' works in their local library, or works by renowned artists in a regional gallery. All iterations are welcome as the main aim of the project is to engage as big a portion of the community as possible with the wonder of migratory shorebirds and the riches of our local environment.

For full project details, to discuss the project, or to initiate your own iteration of the project, **please contact**:

Kate Gorringe-Smith, Project Co-ordinator

E:**overwinteringproject@gmail.com**

M: 0432 322 408

W: **www.kategorringesmith.com.au**

FB: **https://www.facebook.com/theoverwinteringproject/**

Toondah Wetlands, Queensland

In May 2017, the Environment Minister Josh Frydenberg gave the green light for the Toondah Harbour development proposal in Moreton Bay to progress to the next stage in the assessment process. Unfortunately, the opportunity to reject the controversial proposal to develop Toondah Harbour at its first stage in the referral process by declaring it a 'clearly unacceptable' action under the *Environment Protection and Biodiversity Conservation Act* (1999), was rejected.

The decision relates to a marina and medium-density housing development at Toondah Harbour, proposed by the Walker Corporation, that will destroy over 40ha of the Ramsar-listed Moreton Bay Marine Park. The area is one of the most important places in Australia for the critically endangered Eastern Curlew.

"In designating a wetland as a Ramsar site, countries agree to conserve these internationally important wetlands and ensure their wise use. Ramsar sites are recognised as being of significant value not only for the countries in which they are located, but for humanity as a whole," said Evan Quartermain, Senior Program Manager at Humane Society International. "They should be completely off limits to destructive development".

"Not only will this development destroy critical feeding sites for at least 30 bird species, including the Eastern Curlew, it will reclaim over 40 hectares of wetland protected by multiple international treaties and agreements: the Ramsar Convention on Wetlands, the Convention on Migratory Species, bilateral agreements with Japan, China and South Korea, and the Single Species Action Plan for the Conservation of the Far Eastern Curlew," continued Ms Warren.

Through the *Places You Love Alliance* environment groups are campaigning for new laws to protect nature.

Source: http://birdlife.org.au/media/development-to-destroy-critical-wetland/Controversial development set to destroy critical bird habitat and internationally protected wetlands

Maths helps to keep dogs away from shorebirds

Not everyone is aware of the plight of shorebirds or the need to give them peace, and local shorebird managers are encouraged to carry out information campaigns. This is where a little decision science can help. Given they must also manage commercial and recreational fisheries and tourism on top of shorebirds, there is a need to optimise where and when they carry out information campaigns to avoid wasting precious time and funds, while delivering the best possible outcomes for the birds.

Dogs and shorebirds don't mix and many species of shorebird are in dire trouble. How much effort do you spend patrolling a range of shorebird sites to ensure people are doing the right thing? (Image by David Salt)

Consider this: if you have 10 sites that you could visit between 0 and 5 times, there would be a total of 60,466,176 possible combinations of site visits. How would you figure out which of these possible combinations delivers the best outcome?

A few other numbers and a bit of maths will help here. How many birds are at a site? How many disturbances? How much will it cost to manage that site? With this information, it is possible to do a cost-benefit analysis to determine which combination of site visits delivers the best outcome within the specified budget.

However, the more you visit a site, the more you will start talking to the same people over and over again about shorebirds. There is, therefore, a trade-off between visiting a site too much and wasting your time talking to the same people, or visiting a site too little and not talking to enough people.

How do you explore this trade-off? We attempted it by expressing the trade-off as a mathematical formulation (Dhanjal-Adams *et al*. 2016). We found that if management was effective (i.e. almost everyone started putting their dog on a leash after talking to marine park officials), then it was best to manage a lot of sites a few times. However, if management was not very effective (i.e. only a handful of people started putting their dog on a leash after talking to marine park officials), then it was best to find sites with lots of birds being disturbed, and repeatedly visiting them. This ensures as many people as possible are persuaded to keep their dogs on a leash near shorebirds.

These methods apply to a range of management scenarios extending well beyond shorebirds. Say for instance you are deciding which sites to visit to ensure as many rhinos as possible are protected from poaching, or where to patrol to ensure fish stocks are not depleted. All that is needed is information on target species (average number of rhino or fish), infractions (numbers of caught poachers or illegal fishers), and the cost of patrolling (how much petrol do you need to get to those sites).

It's important to note that enforcement is not the only tool available in the manager's toolbox. For shorebirds, for example, better dog-walking facilities (where dog owners can go and let their dogs run off-leash) would reduce the number of people walking their dogs on the beach, and would in turn reduce the need to carry out information campaigns.

The underlying message is that everything is a balancing act, and successful conservation requires a mix of community involvement, government engagement and implementable management plans. Engaging communities and governments is a long and complex process, but devising cost-effective management plans need not be so with the right tools.

Kiran Dhanial-Adams
24 April 2017

More info: kiran.dhanjal.adams@googlemail.com

Reference

Dhanjal-Adams KL, K Mustin, HP Possingham & RA Fuller (2016). Optimizing disturbance management for wildlife protection: the enforcement allocation problem. *Journal of Applied Ecology* 53: 1215–1224.

Source: **http://decision-point.com.au/article/using-maths-to-decide-when-to-put-dogs-on-leashes/decisionpoint**

Notes on Ruddy Turnstone geolocators

Retrieved from King Island, Australia November 2016 and March 2017

A total of 46 geolocators were retrieved from Ruddy Turnstone on the coasts of King Island during visits by the VWSG teams in November 2016 and March 2017. I will point out that this is part of an ongoing program by Marcel Klaassen at Deakin University who provided the funds for the purchase of these loggers. They were all downloaded successfully to retrieve the data (thanks to James Fox for help with eight of the older ones). One logger failed which meant we obtained 45 sets of data, some with multiple years. In fact, there were 54 tracks recorded although not all were complete round trips. The following sets out some of the major findings and insights from this record-breaking number of retrievals. This summary is not as detailed as most of those provided previously for the reasons of time and resource input for this huge number of tracks. In addition, it should be recognised that we now have a good understanding of the general migration strategies for this species. Nevertheless, the tracks derived from each of these loggers have been examined and any departures from the conventional migration characteristics have been noted.

The following outlines aspects of interest:

i. Of the 46 geolocators retrieved, 10 had two years of tracks, that is, they recorded two consecutive years of migration. Furthermore, another 9 had tracks recorded in previous years.

ii. These loggers recorded tracks during the following breeding years: 2013 (2), 2014 (6), 2015 (9), 2016 (38).

iii. All 45 birds with viable data certainly got to the Arctic and could be assumed to have reached the breeding grounds. For those with multiple tracks, the geolocator often stopped at some point during the southward migration in the second year.

iv. One of the key characteristics that we have been able to deduce from the geolocator data is whether birds incubated and if so, whether they were potentially successful (judged by a continuous incubation period of 20 – 21 days). The pre-incubation egg-laying period was less defined. Of the 38 sets of data for breeding season 2016, 16 were judged to have been successful. This is a ratio of 42% (note the same figure for the South Australian (SA) birds for 2016 was 58%). This high rate is supported by the percent juveniles recorded in our cannon-netting catches of 28.6% (VWSG Bulletin 2017).

v. Another useful characteristic obtained from the data is the departure date from King Island. This was predominantly 11/12 April in 2016. It is interesting to compare this date with the SA birds. The King Island birds depart 16 days before the SA birds. As no difference in breeding location has been found (see Simeon's work last year), the reasons for this are unclear.

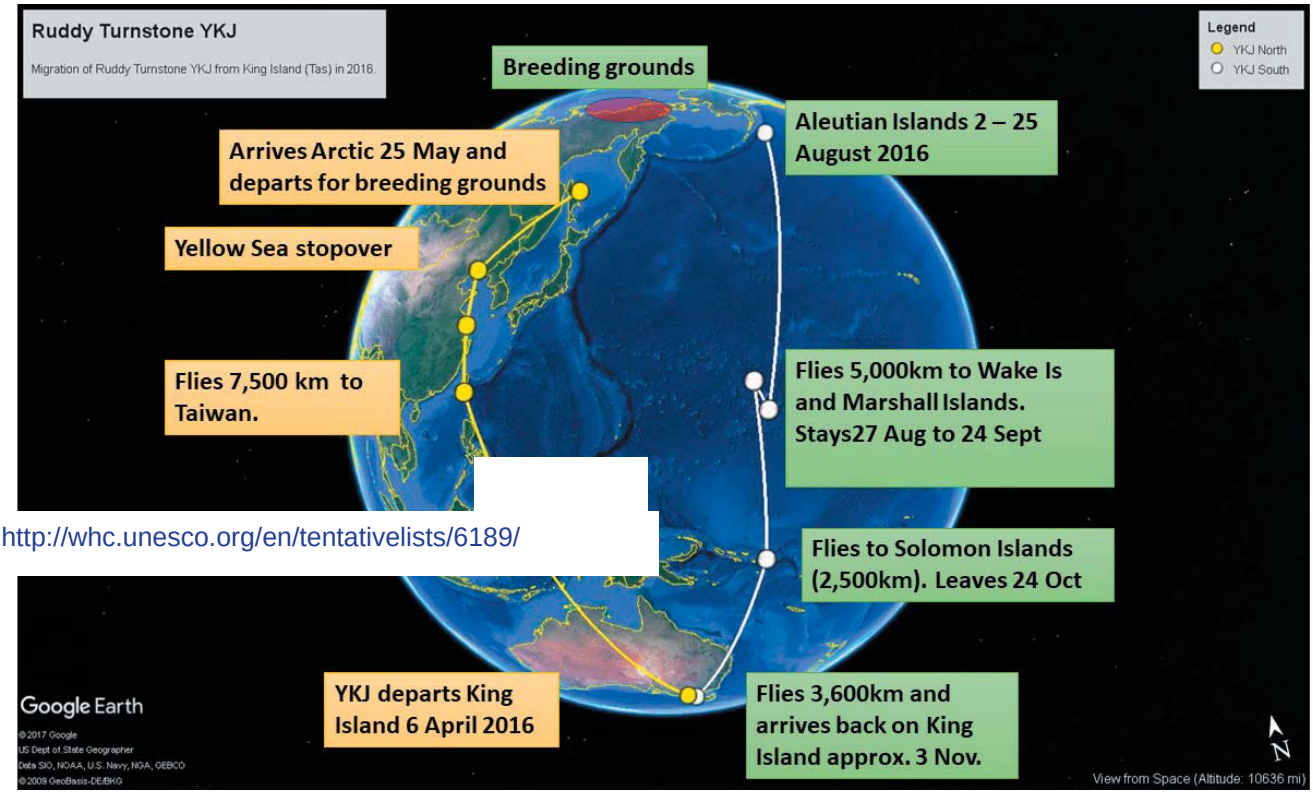
vi. An initial examination of the wind patterns at this time shows an extensive high-pressure system (1030hPa) over southern Australia. The influence of winds at various altitudes with respect to departure dates is a topic that needs further exploration and understanding.

vii. The tracks for each of the birds have been examined and, in general, the northern track follows that found on almost all the previously reported Ruddy Turnstones. In essence, the birds make a long first stage to Taiwan or Hainan (5-7 days), move north along the China coast to the Yellow Sea from which they head for the breeding grounds.

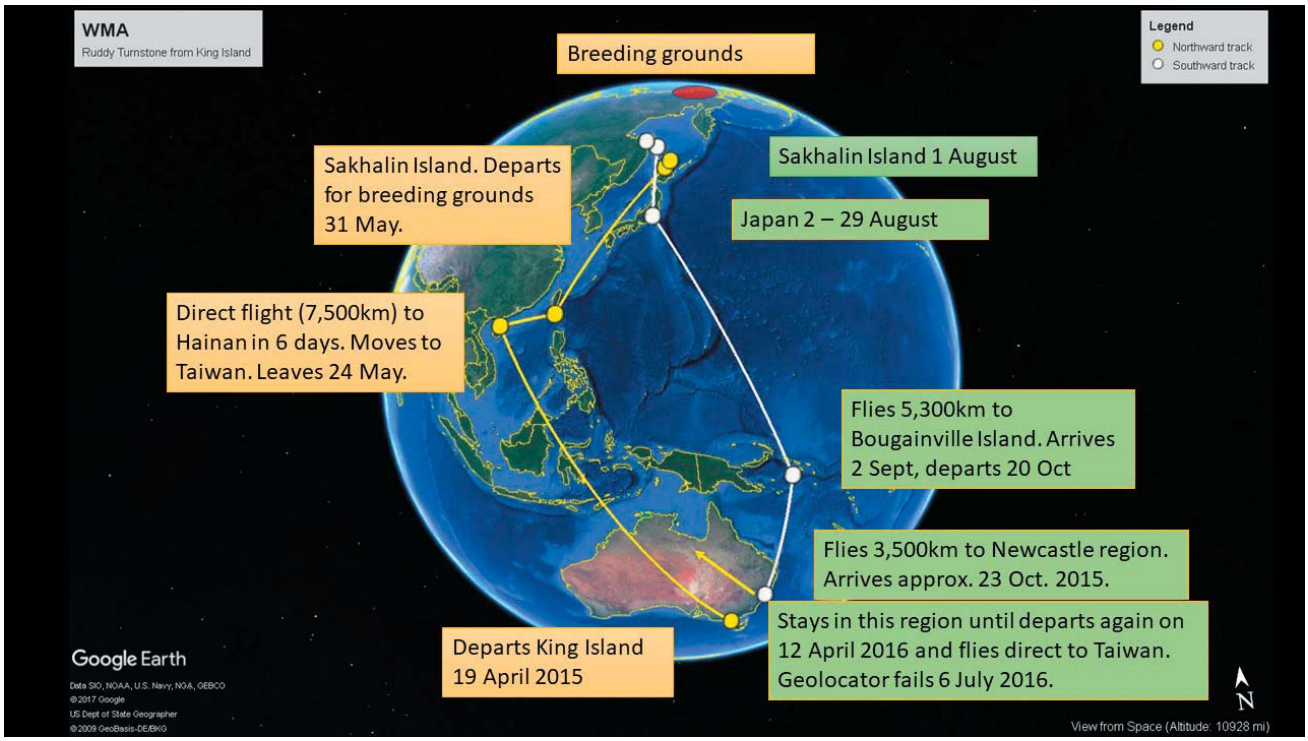
viii. On southward migration stopovers are generally the Jiangsu coast of China with subsequent stops in the Philippines and Indonesia, north Western Australia and/or southwest Western Australia before returning to King Island. However, there were two standout southern tracks: one being YKJ (male) which flew from the breeding grounds to the southern islands of the Aleutians before taking off over the Pacific. It appeared to make the first stop near Wake Is and Micronesia (similar to the recent South Australian bird, YDB) and a second stop on the Marshall Islands and the Solomon Islands before heading to mainland Australia, Victoria and King Island (about 1/11/16). It is interesting that this is the second bird this season to return using this route, the other being YDB from SA. See attached map showing simplified tracks. In almost 200 geolocator tracks recorded for this species, the only other bird that achieved this was 9Y, a bird from Flinders, Victoria for which we recorded two consecutive years when it used this route in 2009 and 2010.

ix. The other unusual track was recorded by WMA. This logger was deployed at King Island in Feb 2015; on northward migration, it went directly from its stopover in Hainan and Taiwan to Sakhalin Island (overflying

Notes on Ruddy Turnstone geolocators cont.



http://whc.unesco.org/en/tentativelists/6189/



the Yellow Sea) and then to the breeding grounds. On the return journey, it flew from the Sea of Okhotsk to Japan and then to the Pacific Islands (Bougainville/Solomon Islands) before returning to the Newcastle region (NSW) in Australia. It stayed in this region for the austral summer before departing northwards on 14 April 2016 and flying directly to Taiwan again. Of particular interest is that this bird was observed in the Newcastle Beach area on three occasions over the 2015/16 summer. Unfortunately, the logger stopped while in the breeding grounds in July 2016. See map depicting simplified tracks. However, it was observed back at Newcastle Beach in November 2016 and captured on King Island in March 2017.

These notes are essentially to provide feedback to the teams who made the huge commitment of deploying and catching geolocator birds on King Island. Without them we would not have any of these results.

Ken Gosbell
28 September 2017